REPRESENTATIONS OF ATTACHMENT AND SOCIOMETRIC STATUS AMONG PRESCHOOLERS

by

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STATEMENT OF THESIS APPROVAL

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ABSTRACT

The purpose of this study was to examine the associations of a child's early relationship with his or her primary caregiver, his or her representation of that relationship, and his or her status within a peer group or, more specifically, between the quality of a preschooler's internal representations of attachment and the peer status he or she achieves in the context of the classroom.

This study was conducted over an 8-month period and involved two interviews: (a) one assessing representational models and (b) one assessing peer status. Results showed that (a) there is a difference in the quality of the representational model and (b) the model does have an impact on later behavior (as measured through peer status). Research results are discussed, and implications are presented.

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CHAPTER 1

INTRODUCTION

The attachment relationship between each mother (or primary caregiver) and her child has long been thought and later shown to have a significant influence on behavior and development throughout the life of the child (Bowlby, 1973; Bretherton, 1987; Sroufe & Fleeson, 1986). From the attachment relationship, an internal representational model emerges within the mind of the child (Bowlby). This model includes the child's external reality and his or her own possible actions (Bretherton, 1987; Craik, 1943). The representational model is believed to guide the child's appraisal of his or her experience and his or her behavior (Main, Kaplan, & Cassidy, 1985) in future relationships (Bretherton, 1987). In substance, a child attempts to create in each new relationship aspects of the pattern with which he or she is familiar (Bretherton, 1985).

The connection of attachment with later relationships is well illustrated in early behavior. Those early peer relationships are formed directly after attachment with the mother (Erwin, 1993), as demonstrated by studies linking the infant's quality of attachment with his or her behavior in the preschool years. Matas, Arend, and Sroufe (1978) found that infants who were securely attached to their mothers at 18 months of age were more likely than their insecurely attached counterparts to comply with their

mothers' requests and to demonstrate competence with their peers at 2 years of age. On the other hand, children who were insecurely attached to their mothers appeared unhappy and were more aggressive toward their parents. In addition, Arend, Gove, and Sroufe (1979) found that these same children continued to show identical differences in development throughout the kindergarten years. LaFreniere and Sroufe (1985) found other qualities of securely attached children as they relate to peer relationships such as a greater social orientation, empathy, and behavior that is more cooperative and friendly. Further, LaFreniere and Sroufe found that securely attached children tended to be more popular and to have more friends than their insecurely attached counterparts.

While it has been established that attachment quality is related to early relationships with peers, no empirical evidence has been found that directly supports a connection between a child's early relationship, his or her internal representation of that relationship, and his or her status within a peer group. The purpose of the current study was to examine one of these heretofore unexamined associations: the quality of a preschooler's internal representations of attachment and the peer status he or she achieves in the context of the classroom.

CHAPTER 2

LITERATURE REVIEW

The Attachment Relationship: A Basis From Which Representation Emerges

According to attachment theorists, the first and primary attachment relationship develops between the mother and infant during the 1st year of the infant's life (Bowlby, 1969/1982; Bretherton, 1987). The attachment relationship forms through interactions within the dyad of the mother and infant (Ainsworth, Blehar, Waters, & Wall, 1978). These interactions may appear to be simple, yet their effects have been shown to be far-reaching (Bowlby; Bretherton; Bretherton, Ridgeway, & Cassidy, 1990; Main et al., 1985). From the time the mother gives birth, she begins to respond to each distinct behavior of the infant. For example, in response to crying, a mother may change a diaper, feed the infant, or do nothing—each of which is in reaction to her child's behavior. As the infant and mother continue to interact, each will have expectations about the other based upon past interaction. For example, if a 10-month-old infant is hungry and a certain vocalization has previously led the mother to offer food to the infant, then the infant will likely vocalize in the same way to be fed.

Basic interactions between the mother and infant as well as expectations that

develop as a result begin to lay the foundation for more complicated interactions later on. As the infant continues to develop both cognitively and physically, he or she is able to become more active when interacting with his or her mother (Brazelton, Koslowski, & Main, 1974). Coordinating behavior occurs between the mother and infant; that is, either the mother or infant initiates interaction with the other and then the mother or infant interacts by taking turns (Brazelton et al.).

Through continued interaction, the infant begins to internally represent a certain complex organization and predictability as related to the mother (Sroufe, 1990). Based upon this organized representation, the infant continues to investigate his or her world by using the mother as a base from which to explore (Sroufe). Through this goal-directed, purposeful behavior exhibited by the infant, it is possible to see manifestations of this organization. Further, it is out of this organization that an internalized representation of the attachment relationship develops (Bretherton, 1987; Isabella, 1995; Sroufe).

Internal Representation of the Attachment Relationship

It is widely accepted among attachment theorists that the internal-working model of the attachment relationship plays a role in the development of the child (Bowlby, 1973, 1980; Bretherton, 1987; Bretherton et al., 1990; Craik, 1943; Isabella, 1995; Johnson-Laird, 1983; Main et al., 1985; Sroufe, 1990; Sroufe & Fleeson, 1986). The internal-working model eventually consists of beliefs, perceptions, expectations, and attitudes about the self and others, and it is believed to serve as the foundation from which a person interacts in relationships (Main et al.). For example, if a child's

experience and representation of his or her attachment figure are mainly rejecting, it is likely that his or her internal-working model would be unacceptable or unworthy. In addition, if a child's attachment figure is supportive and available, then it is likely that his or her internal-working model would be worthwhile and lovable (Bretherton et al.).

Sandler (1975) also discussed the internal-working model, suggesting that over time a new organization emerges that is not focused around the caregiver but around the arising self. Sandler further posited that the change from dyadic organization to self-organization is of great importance; that is, it establishes the pattern of all later relationships. In support of Sandler's theory, Sroufe and Fleeson (1986) found that young children seek and explore new relationships within the framework of expectations for the self and others that are based upon the attachment relationship. In addition, the internal-working model plays an active role in the guidance of behavior and appraisals of experience (Bowlby, 1969/1982, 1973; Main et al., 1985). For example, if a child's working model is that he or she is unworthy because of a consistent lack of the mother attempting to meet his or her needs, then that child may not attempt to seek a child care provider's assistance when his or her diaper is wet because of the history of interaction with his or her mother.

Another theory that supports the existence and influence of the internal-working model is event representation. The theory of event representation supports Bowlby's (1969/1982) theory, with Mandler (1979) arguing that representation is believed to be "governed by event schemata or scripts" (p. 263; Nelson & Grundel, 1981; Schank & Abelson, 1977) that consist of basic information about repeated events in the life of each

individual (Bretherton et al., 1990).

In addition, Schank's (1982) most current theory involving scripts and event representation argued that information gathered from memories, including affect, is reprocessed, cross-indexed, and summarized in many ways. Some experiences are incorporated into specific former scripts, others are generalized across certain events such as bedtime situations, and still others are generalized across event categories such as caregiving situations (Bretherton et al., 1990). Moreover, information from new memories will be incorporated into other structures that consist of general information about actions, intentions, and emotions (Bretherton et al.). Through this organization and ordering, it is possible to determine how experiences with attachment figures (e.g., mother) can have a powerful influence on a more general internal-working model.

With respect to the formation of internal-working models, Nelson and Grundel (1981) found that 3-year-olds who were asked to recall and discuss specific memories of a routine event (e.g., eating dinner last night) usually recalled an event schemata or script rather than autobiographical memories of that specific event. This work illustrates the early formation of an internal-working model and the powerful influence that the internal-working model has, even at a very young age.

Although it may seem that event representation focuses on routine events (e.g., having dinner) and has not addressed qualitative differences in attachment experience, Bretherton et al. (1990) pointed out that, based upon anecdotal evidence, event schemata enacted by toddlers are representative of qualitative aspects of relationships. They illustrated this point through an example of a 2-year-old who reenacts separations and

reunions with her dolls and who may be activating her working model of experiences with her parents. According to the most current event representation theory, another factor that supports the retention of qualitative aspects of representation is that affect is also part of the information derived and processed from memories (Bretherton et al.).

Internal-working models are active constructions capable of being restructured. However, once organized, internal-working models do not operate inside conscious awareness and, therefore, resist drastic change (Bowlby, 1980; Main et al., 1985). Only when there is a lack of fit between the working model and concrete circumstances will an individual attempt to accommodate and alter the model (Bretherton et al., 1990). For example, as a result of a child's maturity and growth, both the child and parents would need to update their internal-working models to reflect changing needs.

Socioemotional Development Beyond Infancy

In support of the belief that the representational model that emerges from the attachment relationship guides behavior in subsequent relationships, studies have linked attachment quality to young children's expression and control of emotions throughout the preschool years (Sroufe, Schork, Motti, Lawroski, & LaFreniere, 1984). In addition, Matas et al. (1978) found that infants who were securely attached to their mothers at 18 months of age were more competent with their peers at 2 years of age and were found to be happier, less aggressive, and less easily frustrated. Conversely, insecurely attached children appeared unhappy and were more aggressive than securely attached children toward their parents. In a longitudinal study, Arend et al. (1979) also found that

differences in development continued throughout the kindergarten years. In other words, differences in security of attachment at 18 months of age and autonomous functioning at 2 years of age were related to dimensions of ego control and ego resiliency at 4 and 5 years of age. Other studies have confirmed that infants who had secure attachments with their mothers were more likely to demonstrate positive patterns of social behavior 3 to 4 years later. For example, children with secure attachments were generally more curious, more confident, more skillful, and less dependent (Erickson, Sroufe, & Egeland, 1985) compared with their counterparts with insecure attachments. In addition, LaFreniere and Sroufe (1985) found that because securely attached children were more socially oriented, empathic, cooperative, friendly, and outgoing to their counterparts with insecure attachments, they were also more popular and had more friends. These findings support the belief that attachment quality is related to early relationships with peers.

Assessment of Socioemotional Development in Preschoolers

In examining the social competence of children, an approach that has proven effective is to select children who have been reported by a consensus of peer judgments to be socially competent compared with those judged to be socially incompetent (Dodge, 1985). This approach has allowed researchers to determine what children do to be engaged in socially competent behavior and is the basis for the behavioral comparisons of sociometric status (Dodge).

Several studies have demonstrated that socially competent (popular) children display positive behavior and frequent cooperative play compared with socially

incompetent (rejected) children. In contrast to the more competent children, incompetent children demonstrated negative behavior, physical and verbal aggression, and deviance (Dodge, 1985; Dodge, Coie, & Brakke, 1982; Hartup, Glazer, & Charlesworth, 1967).

In addition to the demonstration that peer status can be linked to certain behaviors in children, it has also been shown by Coie and Dodge (1983) that there is a continuity with regard to this status. The status that each child develops among her or his peers has been shown to remain stable for extended periods. Coie and Dodge, using *picture nomination* to allow for peer sociometric evaluation, found that there was significant continuity across 5 years for fifth-grade students (with assessment beginning in the first grade) and across 3 years for third-grade students (with assessment beginning in the second grade). In addition, Sroufe and Jacobovitz (1989) followed children for more than a decade and found that social competence remained relatively stable. They reported that 10-year-olds with a background of secure attachment scored significantly higher on *ego resiliency*, self-confidence, and overall competence. In addition, they found that these same children who scored lower on dependence were less likely to be passive recipients of aggression and also less often isolated. As these studies have demonstrated, peer status has been shown to remain relatively stable over time. In support of this view, Sroufe (1979) reported the following: "We cannot assume that early experiences will somehow be cancelled out by later experience; lasting consequences of early inadequate experience may be subtle and complex, . . . but there will be consequences" (p. 839).

As the internal-working model of the attachment relationship is believed to influence all later relationships, a valuable step, not yet taken, is to examine differences

in the quality of the model itself and whether it has an impact on later relationships. Research has demonstrated that attachment quality can be predicted by early interactions and that attachment quality can predict socioemotional development in later years (Erickson et al., 1985; Jacobsen & Wille, 1986; LaFreniere & Sroufe, 1985; Londerville & Main, 1981; Main & Weston, 1981; Sroufe, 1983). However, it has not been empirically established that it is the representational model of attachment that allows for coherence between attachment quality and later behavior (measured through peer status); therefore, this question was the subject of the present research.

Given that the representational model is believed to guide a child's appraisal of his or her experience and behavior and that certain behaviors among a child's peers lead to that child achieving a certain status among his or her peers, it is expected that a child's representational model of the attachment relationship will be related to the peer status he or she achieves in the preschool setting. More specifically, a child who is found to be popular within his or her peer group will likely have a more secure representational model of attachment than the child who is unpopular.

CHAPTER 3

METHODS

The data for this study came from an 8-month investigation of 3- to 5-year-old children in the Child and Family Development Center in the Department of Family and Consumer Studies at the University of Utah. Data collection included interviews with the children. Interviews were conducted in the parent library next to the Child and Family Development Center.

Participants

Participants for this study were 44 children drawn from 95 students, children who were largely middle-class and White, and children who were attending the preschool and kindergarten classes in the Child and Family Development Center in the Department of Family and Consumer Studies. The participants were between 3 years, 2 months and 5 years, 10 months of age at the time the first assessment was conducted in October 1995, with a mean age of 4 years, 7 months.

Of the 95 children eligible for the study, 47 (49.5%) were granted permission by their parents to participate in the first of two interviews. However, only 44 children actually participated in the initial assessment, 2 children refused to be interviewed, and 1

child left the preschool prior to the time the interviews were conducted. The composition of each class was fairly stable throughout the academic year as follows: (a) Class 1, 2 children out of the 24 left school or did not attend regularly; (b) Class 2, 3 children out of the 23 left school or did not attend regularly; (c) Class 3, 7 children out of the 22 left school or did not attend regularly (youngest class, mean age = 4 years, 2 months); and (d) Class 4, 3 children out of the 26 left school or did not attend regularly.

After the first interview had been completed and prior to sociometric assessment, permission was solicited again from those parents who had not consented to their children's participation in the first interview. Five additional children were granted permission to participate in the second interview.

For all those who were invited to participate in this study ($N = 95$), 53 (56%) were male and 42 (44%) were female. For those who participated in both assessments ($N = 44$), 26 (59%) were male and 18 (41%) were female.

Background Variables

The background variables were taken from the Child and Family Development Center application form. This form was filled out by one of the child's parents in the spring previous to the school year the child entered class. The background variables included (a) gender, (b) adopted, (c) mother's nationality, (d) father's nationality, (e) mother's marital status, (f) father's marital status, (g) mother's education, (h) father's education, (i) mother's occupation, (j) number of hours worked each week (mother), (k) father's occupation, (l) number of hours worked each week (father), (m) number of

siblings, (n) family change, (o) child care, (p) habits, and (q) fears.

For this sample, only 2 children were adopted. A majority of mothers and fathers were White (mothers = 91.1%, fathers = 91%), still married to the biological parent (mothers = 92.4%, fathers = 93.6%), and worked in professional jobs (mothers = 55.1%, fathers = 76.9%). Most families had not recently experienced any type of major change. In addition, most of the children in the study had been cared for (not necessarily day care) by nonfamily members and family members, and they had a mean of 1.35 siblings.

To assess whether the background variables (gender, adopted, mother's nationality, father's nationality, mother's marital status, father's marital status, mother's education, father's education, mother's occupation, number of hours worked each week [mother], father's occupation, number of hours worked each week [father], number of siblings, family change, child care, habits, and fears) were different for those who participated in the study than for those who did not participate, chi-square analyses (used for categorical variables) were conducted. In performing chi-square analyses, individual analyses were run for each measure, with a chi-square analyses of 11. Only one difference was found between the two groups: the nationality of the mothers and fathers. If the mother or father of the child was White, he or she was more likely to have consented for his or her child to participate in this study. A relatively small population of minorities live in the community where the Child and Family Development Center is located; therefore, a small population of ethnic minorities attend the Child and Family Development Center. Given that only 8 minority children attended the Child and Family Development Center, the fact that only 1 child participated in the study is not likely to

have affected the representativeness of the sample on this variable.

Design

The purpose of this study was to examine the quality of preschool students' internal representation of attachment as it relates to the peer status they achieve in the context of their classroom. This study was conducted over an 8-month period (October 1995 to May 1996) and involved two interviews: (a) one assessing representational models and (b) one assessing peer status. In October 1995, a letter explaining the project and a consent form were distributed to parents (see Appendix A). Parents were asked to return the consent form to a file located at the entrance of their child's classroom.

During November and December, children for whom parental consent was provided were interviewed to assess their representational model of attachment. In February 1996, a second letter and a consent form were sent to parents who had not consented initially to have their child in the study (see Appendix B). The parents' consent was sought in order to allow their child to participate in the second interview and to provide parents with the option of not allowing their child's photograph to be included in the sociometric interview. No parents indicated a preference to have their child's photograph excluded, and 5 parents consented to allow their child to participate in the second interview. During April and May 1996, photographs were taken of each child in each class (with few exceptions, as outlined below). These photographs were used to conduct interviews to assess sociometric status (peer status). For each class, the following list describes those for whom photographs were not taken: (a) Class 1, one photograph

not taken; (b) Class 2, one photograph not taken; (c) Class 3, one photograph not taken; and (d) Class 4, all photographs taken.

Measures and Procedures

Representational Models

To assess children's representational models of attachment, the Separation Anxiety Interview, Seattle Version (Slough, Goyette, & Greenberg, 1988), an adaptation of an interview developed by Klagsbrun and Bowlby (1976), was used. For the Separation Anxiety Interview, each child is shown a series of six 5-inch by 7-inch black-and-white photographs of a child and his or her parents in a variety of settings, each depicting some form of separation (Slough et al.). Following a brief description of each picture, the participant is asked to explain what the child in the photograph is feeling and how the pictured child will react to the situation portrayed. Three of the photographs depict separations considered to be more difficult or intense for children such as parents go out for the evening, leaving the child at home; (b) parents go away for the weekend, leaving the child with an aunt and uncle; and (c) parents go away for 2 weeks, giving their child a gift prior to their departure. The other three photographs depict separations viewed as less intense. In other words, they represent more common experiences for children such as (a) child's first day of school (moment of parting from the mother); (b) park scene (parents tell child to go play by himself or herself for a while because they want some time alone together to talk); and (c) mother tucks child into bed and leaves room. For this interview, two sets of pictures were used: (a) one for boys and (b) one for

girls. However, the only characteristic that changes between the sets of pictures is the gender of the child pictured; the parents, other characters, and scenes remain the same (Slough et al.).

Interviews were conducted by three trained research assistants. For each interview, the interviewer went to the classroom and provided the teacher with a list of target children, affording the teacher an opportunity to indicate if children on the list were absent. If the children were present, they were approached individually by the interviewer or the teacher and asked if they would be willing to go with the interviewer to look at some pictures and to answer some questions. If the child declined or hesitated, the interviewer attempted to solicit his or her participation once more. However, if the child continued to decline, she or he was informed that she or he could participate on another day. Once a child had agreed to be interviewed, the interviewer and the child went into the parent library, a room adjacent to or across the hallway from the child's classroom.

The parent library was set up with two chairs and a table. One of the chairs was smaller; the child sat in that chair. A tape recorder was on the table. The interviewer used the Separation Anxiety Interview protocol (script) during the entire interview (Slough et al., 1988). After the interviewer and child were situated in the room, the interviewer turned on the recorder, stated the identification number, stated the day and time, and introduced the procedure to the child as follows:

> Sometimes parents have to go away for a little while and leave their little girl [boy]. We would like to know how children feel when their parents have to leave. Some children feel happy, some feel angry, some feel scared, and some feel okay. We would like you to help us know how little girls [boys] feel. (Slough et al., p. 48)

Each picture was shown to the child, one at a time, with a brief (scripted) explanation of the pictured situation from the interviewer. Following this description, for each picture, the child was asked the following three questions: (a) How would the little girl [boy] feel? (b) Why would the little girl [boy] feel _____ [sad, happy, etc.]? and (c) What would this little girl [boy] do? For coding purposes, these three questions were referred to as a set of questions, and responses to the questions were referred to as a set of responses pertaining to the child in the photograph ("other"). The child was then asked an additional three questions for each picture: (a) How would you feel if you were the little girl [boy]? (b) Why would you feel _____ [sad, happy, etc.]? and (c) What would you do? Again, for coding purposes, these three questions were referred to as a set of questions, and responses were referred to as a set of responses pertaining to "self." During the interview, if a child did not respond to a particular question, scripted prompts were used in an attempt to elicit an answer from the child. These prompts, used when necessary, were as follows: (a) How do you *think* the child might feel? and (b) Go ahead and just guess. In most cases, these prompts allowed the interviewer to get an answer from the child when she or he had not readily offered an answer. In addition, any prompts or responses were included as part of the set in which they were found.

For coding purposes, interview audiotapes were transcribed by the interviewers within 48 hours of the interview. Transcripts were eventually coded using the procedures of Slough et al. (1988). The main unit of analysis in coding the transcripts was the set of responses. The focus in coding the response sets (for both the child in the photograph [other] and the self) was on the following criteria: (a) The valence (positive, negative, or

mixed) of the feeling given in answer to two questions (How does the little girl [boy] [pictured] feel? and How would you feel?); (b) the justification for the feeling given in answer to two questions (Why does the little girl [boy] [pictured] feel _____? and Why would you feel _____?); and (c) the content of the coping given in the answer to two questions (What is the girl [boy] [pictured] going to do? and What would you do?).

Coding Procedure

Categorizations and Codes Assigned

The first step in the coding procedure was to categorize each set of responses (two sets for each photograph) separately for the child in the photograph (referred to as other) and for the child being interviewed (referred to as self) into one of the following five major categories: (a) attachment, (b) self-reliant, (c) attachment/self-reliant, (d) avoidant, or (e) additional. The second step in the coding procedure was to decide which subcategory best fit the response given (see Table 1). Slough et al. (1988) listed specific subcategories and corresponding descriptions depending on the main category selected. The subcategorization allowed for a more detailed characterization of possible responses by level (e.g., high or low attachment) or specific behaviors (e.g., attachment/increase access to parents). For example, the response set for a photograph depicting going out for the evening was as follows:

> Interviewer: In this picture, the mother and father are going out for the evening, and they're leaving the little girl [or boy] at home. How do you think the little girl [or boy] is feeling
> Child: Sad. [valence]
> Interviewer: Why does she [or he] feel sad?
> Child: [Be]cause her parents are going away. [justification]

> Interviewer: Because her parents are going away? And what is she [or he] going to do?
> Child: I think play with her [or his] dog and her [or his] cat. [coping]
> Interviewer: Play with her [or his] dog and her [or his] cat?
> Child: [participant nods]

To correctly assess which of the five major categories this response set would fall into, the coder must first assess the valence or emotion and the justification for the emotion. In this case, the child's emotion (sadness) had a negative valence. In addition, justification for the emotion was attributed to the parents leaving. This combination of negative valence and justification best fits the main category of attachment; that is, a negative emotion is associated with the parents' departure. The next step is to determine which subcategory, within the main category of attachment, best fits this response. To determine the best subcategory, the content of the coping strategy is assessed. In this case, the coping was appropriate; that is, the child deals with the temporary loss of her parents' availability for a time by playing with her dog and cat. Therefore, given that there was a negative valence because of the separation from parents and the child coped appropriately, the subcategory within attachment that best fits this response is subcategory 1: typical attachment (see Table 1).

Point Assignment

In the third step in the coding procedures, the other and self categorizations assigned to response sets in step two are translated into ratings on three continuous rating scales using the indices developed by Slough et al. (1988).

The three indices used in the scoring are as follows:

1. The Attachment Component Index (Slough et al.) was used for photographs depicting parents going out for the evening, leaving the child at home; parents going away for the weekend, leaving the child with aunt and uncle; and parents going away for 2 weeks and prior to departure, they give the child a gift—as they were expected to elicit attachment-type responses.
2. The Self-Reliant Component Index (Slough et al.) was used for photographs depicting child's first day of school; a park scene; and mother tucks child into bed and leaves room—as they were expected to elicit self-reliant-type responses.
3. The Avoidant Component Index (Slough et al.) was used for photographs depicting parents going out for the evening, leaving the child at home; parents going away for the weekend, leaving the child with aunt and uncle; child's first day of school; parents go away for 2 weeks and prior to departure, they give the child a gift; a park scene; and mother tucks child into bed and leaves room—as they were allowed to detect avoidance in any response.

Responses to photographs depicting parents going out for the evening, leaving the child at home; parents going away for the weekend, leaving the child with aunt and uncle; and child's first day of school were used in assessing the Attachment Component Index of the representational model. These photographs were considered severe

separations and were expected to elicit attachment-type answers (e.g., expression of vulnerability or need about the separation; Slough et al., 1988). The point assignments ranged from 1 to 4. The example previously given using a photograph depicting parents going out for the evening, leaving the child at home in which the response set for the child in the photograph was coded as 1, based upon the criteria outlined, was translated into a score of 4, which is the highest score achievable using the Attachment Component Index. Therefore, each response set about the child in the photograph (other) for photographs depicting parents going out for the evening, leaving the child at home; parents going away for the weekend, leaving the child with aunt and uncle; and child's first day of school was given a score using the Attachment Component Index. The same was done for each response set the child (self) gave for photographs depicting parents going out for the evening, leaving the child at home; parents going away for the weekend, leaving the child with aunt and uncle; and child's first day of school. This calculation resulted in three scores for the other-response sets and three scores for the self-response sets.

Responses to photographs depicting child's first day of school, a park scene, and mother tucks child into bed and leaves were used in assessing the self-reliant component of the representational model. These photographs were considered mild separations and were expected to elicit self-reliant answers (e.g., expressing self-confidence and feeling "okay" about handling the separation somewhat independently; Slough et al., 1988). The point assignment ranged from 1 to 4 on the Self-Reliant Component Index as well. For example, if a response set received a code of 7, which is a typical self-reliant answer, that

code was translated into a score of 4, which is the highest possible score utilizing the Self-Reliant Component Index. Again, the other-response sets and the self-response sets were given separate codes. (One response set was used for each set of questions asked, resulting in three codes [three photographs] for the other-response sets and three codes for the self-response sets.) Using the Self-Reliant Component Index, each code was translated into a score that resulted in three scores for other-response sets and three scores for self-response sets.

Responses to photographs depicting parents going out for the evening, leaving the child at home; parents going away for the weekend, leaving the child with aunt and uncle; child's first day of school; parents go away for 2 weeks and prior to departure, they give the child a gift; a park scene; and mother tucks child into bed and leaves room were used to assess the avoidant component of the representational model. The avoidant category indexes the child's ability/inability to answer questions (no matter what these questions were expected to elicit), consisting of incomplete answers or answers including discussion of extraneous matters (Slough et al., 1988). The point assignment ranged from 1 to 3 on the Avoidant Component Index. For example, if a response to one set of questions received a code of 16, which is an avoidant or nonresponsive answer, that code was translated into a score of 3, which is the highest possible score utilizing the Avoidant Component Index. Again, the other-response sets and the self-response sets were given separate codes. (One response set was used for each set of questions asked, resulting in six codes [six photographs] for other-response sets and six codes for self-response sets.) Each code, using the Avoidant Component Index, was translated into a score, resulting in

six scores for other-response sets and six scores for self-response sets. The response sets to each set of questions for the child in the photograph (other) and the response sets to each set of questions for the child himself or herself (self) were coded separately.

Total Point Computation

After the assignment of codes had been completed and points had been assigned for each set of responses using the indices mentioned, total points for the response sets were summed. Each child received a total attachment other score by adding the scores for all of the response sets with regard to the other child (score from Set 1 other minus score from the photograph depicting parents going out for the evening, leaving the child at home plus the score from Set 2 other minus score from the photograph depicting parents going away for the weekend, leaving the child with aunt and uncle plus the score from Set 4 other minus score from the photograph depicting parents go away for 2 weeks and prior to departure, they give the child a gift equals total attachment other score). Each child also received a total attachment self score by adding scores for all of the response sets with regard to the self. Given that the points assigned for each response set ranged from 1 to 4, the range of possible scores for both the total attachment other and total attachment self scores was from 3 to 12. The sample mean for the total attachment other scores was 8.76, and the sample mean for the total attachment self scores was 7.07.

As with the attachment category, after the assignment of codes had been completed and points had been assigned for each set of responses using the indices mentioned, the total points for the response sets were summed. Each child received a

total self-reliant other score by adding the scores for all of the response sets with regard to the other child: score from Set 3 other minus score from the photograph depicting child's first day of school plus the score from Set 5 other minus score from the photograph depicting a park scene plus the score from Set 6 other minus score from the photograph depicting mother tucks child into bed and leaves room equals the total self-reliant other score. Each child also received a total self-reliant self score by adding the scores for all of the response sets with regard to the self. Given that the points assigned for each response set ranged from 1 to 4, the range of possible scores for both the total self-reliant other and total self-reliant self scores was from 3 to 12. The sample mean for the total self-reliant other scores was 8.00, and the sample mean for the total self-reliant self scores was 8.44.

Finally, as with the attachment and self-reliant categories, after the assignment of codes had been completed and points had been assigned for each set of responses using the indices mentioned, the total points for the response sets were summed. Each child received a total avoidant other score by adding the scores for all of the response sets with regard to the other child: score from Set 1 other minus score from the photograph depicting parents going out for the evening, leaving the child at home plus the score from Set 2 other minus score from the photograph depicting parents going away for the weekend, leaving the child with aunt and uncle plus the score from Set 3 other minus score from the photograph depicting child's first day of school plus the score from Set 4 other minus score from the photograph depicting parents go away for 2 weeks and prior to departure, they give the child a gift plus the score from Set 5 other minus score from

the photograph depicting a park scene plus the score from Set 6 other minus score from the photograph depicting mother tucks child into bed and leaves room equals the total avoidant other score. Each child also received a total avoidant self score by adding scores for all of the response sets with regard to the self. Given that the points assigned for each set ranged from 1 to 3, the range of possible scores for both the total avoidant other and the total avoidant self scores was from 6 to 18. The sample mean for the total avoidance other scores was 7.8, and the sample mean for the total avoidance self scores was 9.20.

Data Reduction

Analyses of Representational Model Variables

While testing of hypotheses for this study considered self and other internal representation data in line with the purposes guiding the use of the Separation Anxiety Interview, it was useful to examine associations between self and other ratings within the scale. Correlations revealed moderate to high associations between self and other data for each scale (attachment: $r = .61$, $p < .0001$; self-reliance: $r = .61$, $p < .0001$; and avoidance: $r = .71$, $p < .0001$). Given these associations, composite indices were created for each scale by adding the self and other scores. For analysis purposes, individual self and other data and composite indices for each scale were employed.

In an investigation of the correlation among the components of the representational model, it was also found that the attachment scale was significantly correlated to self-reliance and avoidance. Attachment was found to be positively correlated to self-reliance ($r = .42$, $p < .0076$), showing that participants whose

attachment scores were high were also more likely to have high self-reliant scores. This analysis revealed that participants who could acknowledge their feelings of vulnerability and link them to the separation from their parents were also likely to be able to express self-confidence and independence in dealing with separation from their parents.

Attachment was also found to be negatively correlated to avoidance ($r = -0.74$, $p < .0001$), revealing that participants whose attachment scores were high were more likely to have low avoidance scores. This analysis showed that participants who could not acknowledge their feelings of vulnerability and link their feelings to the separation were highly avoidant, were unable to answer the questions of the interviewers, and wanted to avoid discussion of any separation.

In addition to the self-reliant component of the representational model being significantly related to attachment, self-reliance was significantly and negatively correlated to avoidance ($r = -0.72$, $p < .0001$), illustrating that participants whose self-reliance scores were high were more likely to have low avoidance scores. This analysis reveals that participants who were not self-confident in their ability to deal with a separation from their parents also avoided an acknowledgment of the separation or any discussion of a separation.

Characteristics of Each Component

Participants who were high on the attachment component were able to discuss their feelings freely and then to express that their feelings were somehow linked to the attachment figure as a result of the separation. For example, 1 child indicated that he was

sad because his mother and father were leaving for the evening. In contrast, children who were unable to talk about the separation or discuss it illogically or with undue hostility were low on the attachment component. For example, 1 child indicated that she would be sad if her parents went away for 2 weeks because she would want to be sad and did not know what she would do (no real justification or coping here).

A characteristic of a child who placed high on the self-reliant component is the expression of an ability to utilize strategies for dealing with the depicted separation. For example, 1 child responded to her parents going away for the weekend by playing with her aunt and uncle with whom she was staying. She indicated that she was sad that her parents were leaving (acknowledging her feelings) but had found a good coping strategy by utilizing the companionship of others. Children who placed low on the self-reliant component were unable to justify their feelings or have a coping strategy. For example, 1 child responded that she would be happy if her parents went away for the weekend, did not know why she would feel happy, and coped by playing.

Children who placed high on the avoidant component were unable to answer the questions, they gave incomplete answers, or they did not discuss issues related to the pictures or questions. For example, 1 child answered “I don’t know” to every question about her mother dropping her off at school. Children who placed low on the avoidant component were able to discuss their feelings freely with justifications and coping strategies.

Training and Reliability

Separation Anxiety Interviews

Three female undergraduate assistants and one female graduate student (one for each class, three preschool and one kindergarten) were trained in the interview methods previously described. A training manual for the Separation Anxiety Interview was read and used by all assistants and served as the standard protocol for interviewing. Eight pilot interviews were used to ensure interviewer uniformity in coding technique, questioning, and probing. In addition, weekly meetings were held. All assistants listened to and compared the interview technique. During these meetings, feedback was given to the interviewers. To increase consistency and to reduce any possible reliability decay, extensive discussion was made of possible techniques (Bakeman & Gottman, 1997). I supervised all trainings and meetings.

Coding the Separation Anxiety Interview Transcript

Four undergraduate assistants and one graduate student, blind to the peer-status interview data, were trained in the methods described above in order to code the data from the interview transcripts. A coding manual for the Separation Anxiety Interview was read and used by all assistants (Slough et al., 1988). The manual served as the standard reference source for coding. Each coder coded all eight of the pilot interviews, one at a time, beginning with the same transcript. The results of each coder were compared. Feedback was given periodically to each of the coders, with resulting discussion among coders in order to establish a clear understanding of the coding process

and standard. This procedure continued, using the pilot interviews, until the coders' results for each interview were consistent. Their coding became nearly identical, and all coders agreed on the final codes. Once this initial training was complete, the study transcripts were randomly assigned to the coders. The coders coded only those transcripts assigned to them. In addition, all of the transcripts were coded by at least two coders. The additional coders were assigned to code the answers discussing the child in the picture (other), or the answers discussing the child himself or herself (self), or the full transcript (combined). For each participant, at least one coder was assigned to code only answers for self or other. This process provided a means to assure that the coding of other was not influenced by the coding of self and vice versa. Therefore, all of the transcripts were double coded and often even triple coded. For purposes of analysis, consensus codes determined by coders for that particular participant were used after the original coding had been completed.

To assess coder agreement, a Cohen's kappa analysis was used for decisions concerning the five main categories (attachment, self-reliant, attachment/self-reliant, avoidant, and additional; see Table 2; Bakeman & Gottman, 1997) and for decisions concerning the 21 subcategories (see Table 3; Bakeman & Gottman). Five coders were used, resulting in 10 coder pairs.

The Cohen's kappa agreement statistic corrects for agreement among coders that happened by chance, whereas the agreement percentage does not correct for agreement. Therefore, Cohen's kappa is more conservative and lends greater confidence to the results of this type of analysis of coder agreement. Bakeman and Gottman (1997)

characterized kappas from .40 to .60 as fair, .60 to .75 as good, and .75 or more as excellent agreement. This same standard was employed in the present study. As shown in Table 2, agreement for the five main categories ranged from .68 to .95, with a mean kappa of .81. For the 21 subcategories, intercoder agreement ranged from .63 to .92, with a mean agreement of .76. Although this level of agreement is good, for analyses purposes, consensus ratings were used.

The Separation Anxiety Interview, which was used to assess children's representational models of attachment, was validated by Jacobsen, Edelstein, and Hofmann (1994). They found a meaningful relationship between this measure of the representational model of attachment (for 6-year-olds), an observational measure of child-mother attachment (for 6-year-olds), and quality of the attachment relationship using the Strange Situation 5 years earlier. Jacobsen et al. also found that predictions made with regard to a child's future representation, based upon the results of the Strange Situation conducted several years earlier, were correct in 26 out of the 32 cases (81.3%). In their study of 5-year-olds, Slough and Greenberg (1990) found that responses to questions with regard to the self and other category should be considered reflections of the children's working model. They also found a significant relationship between the children's reports (using the Separation Anxiety Interview) and their actual reunion behavior (as demonstrated after a short 3-minute and then a long 1½-hour separation from their mother). This finding suggests that the "ways in which these children discussed their feelings with regard to separations are a valid index of how they perceive their relationships with their parents" (Slough & Greenberg, p. 82). The longitudinal

consistency and concurrent validity demonstrated in these validation studies support using this picture story as a way to assess children's representation of their attachment relationship.

Sociometric Status

After at least 6 months of social experience in their respective classes, the participants' peer status was assessed using a procedure originally developed by McCandless and Marshall (1957). This procedure is picture nomination, which allows for a sociometric evaluation. The procedure involved each child's picture being taken in the same clothing (shirt) and in the same background so as to eliminate as much variation in appearance as possible. The pictures were taken during school time and were incorporated as a part of the school activities planned for that day.

After the pictures had been taken for each class, the interviews were initiated. The same room (the parent library) used for the Separation Anxiety Interview was also used for this interview. The room was set up with two chairs (one smaller for the child) and a table. Each child was interviewed individually, using individual photographs of all children in the interviewee's class. Each child was asked to look at the pictures that had previously been taken in the class. A group of pictures taken of the children in that child's class was on the table. The pictures were arranged in grid formation facing the smaller chair (child's chair). In the interview, each participating child was asked the following six questions:

1. Which three children would you most like to play with?
2. Which three children would you not like to play with?

3. Which three children would you want to invite to your birthday party?
4. Which three children would you not invite to your birthday party?
5. Which three children would you most want to ride in the car with if your class went on a field trip?
6. Which three children would you not like to ride in the car with if your class went on a field trip?

Each child responded to each question by pointing to the three photographs of his or her choice. After each response, the pictures were gathered, shuffled, and redistributed so that the location of each picture would not have undue influence on later choices. As previously mentioned, some children left the school, but the composition of each class was fairly stable throughout the academic year. In Class 1, 2 children out of the 24 left school or did not attend regularly; in Class 2, 3 children out of the 23 left school or did not attend regularly; in Class 3, 7 children out of the 22 left school or did not attend regularly (youngest class, mean age = 4 years, 2 months); and in Class 4, 3 children out of the 26 left school or did not attend regularly.

To determine peer status, Coie and Dodge's (1983) procedure was used. After all of the interviews had taken place, each child was given two scores (*liked most* and *liked least*) based on the number of times she or he had been nominated by classroom peers in response to the three pairs of questions. Thus, each participant's *liked most* score represented the total number of times she or he had been nominated in response to one of the positive questions. Similarly, each participant's *liked least* score represented the total number of times she or he had been nominated in response to one of the negative questions.

Both the *liked most* and *liked least* scores were standardized within class. This standardization allowed for a comparison of the peer status of each child with all of the

other children in the study while accounting for the variance within each class. Before standardization, it would not be appropriate to compare a child in Class 1 with a child in Class 2, especially with regard to peer status, since these are two distinct social environments.

The following itemization includes the number of children who completed the Peer Sociometric Status Interview (see Appendix C): (a) Class 1 = 18 out of the 23 children (78%), (b) Class 2 = 14 out of the 21 children (67%), (c) Class 3 = 10 out of the 18 children (56%), and (d) Class 4 = 15 out of the 23 children (65%). After standardized scores were determined for both *liked most* and *liked least*, social preference and social impact scores were computed, with *social impact* defined as the sum of the participant's standardized *liked most* and *liked least* scores and *social preference* defined as the participant's standardized *liked most* scores minus the participant's standardized *liked least* scores. The social preference and social impact scores were also standardized within class. Finally, four sociometric status groups were formed according to the following criteria: (a) popular (social preference > 1.0, *liked most* > 0, *liked least* < 0); (b) rejected (social preference < -1.0, *liked most* < 0, *liked least* > 0); (c) neglected (social impact < -1.0, *liked most* < 0, *liked least* < 0); and (d) controversial (social impact > 1.0, *liked most* > 0, *liked least* > 0). For purposes of the present study, the average category was not used because an examination of the criteria for this category revealed that the average category served as a catchall for participants who did not fit neatly into one of the other four well-defined categories. Data were examined for each child not fitting neatly into the four categories defined above (originally in the average category) and placed them into the

category for which the criteria matched most closely the child's *liked most*, *liked least* social preference and social impact scores. As a result of these procedures, 5 children were placed in the popular group, 4 in the rejected group, 7 in the neglected group, and 3 in the controversial group.

Since the sample size was so small, it was decided that the variable social status (four groups) would be converted to a dichotomous variable, also called social status, consisting of two groups (popular and unpopular children). The popular children were classified as popular and the unpopular children were classified as rejected, neglected, and controversial.

Coie and Dodge (1983) found that in the 1st year of their 5-year longitudinal study (beginning in academic year 1975-1976)

> 22% of the third graders and 24% of the fifth graders were identified as popular; 22% of the third graders and 20% of the fifth graders were rejected; 20% of the third graders and 19% of the fifth graders were neglected; and 5% of the third graders and 8% of the fifth graders were controversial; and that the remaining (about one-third of the population) are referred to as average children. (p. 267)

Coie and Dodge also found that the percentage of children who remained in the same-status category were stable over the 5-year period. In other words, these children did not move from the group they were originally assigned based upon the above criteria. Out of the 80 participants whose peer status was assessed, 27 (33.8%) were popular, 19 (23.8%) were rejected, 25 (31.1%) were neglected, and 9 (11.3%) were controversial. Out of the 40 participants used in testing the hypotheses, 14 were popular, 12 were rejected, and 14 were neglected.

Coie, Dodge, and Coppotelli (1982) examined the children's characteristics in

each peer-status group. They found that the popular children were viewed by their peers as prosocial. These children received high scores for descriptions of cooperates and leader and low scores for descriptions of disrupts, fights, and seeks help. In contrast, the rejected children received low scores for descriptions of cooperates and leader and high scores for descriptions of disrupts, fights, and seeks help. It is interesting that these two groups did not differ from each other on the descriptions of shy. The controversial children scored similarly as the rejected children for descriptions of disrupts, fights, and seeks help but were also much like the popular children scoring high for being a leader (although not as high as the popular children). In addition, these children were not perceived as cooperative as were the popular children. The neglected children were considered to be friendless children. However, Coie and Dodge (1983) believed that, based upon their extensive study of peer status, allowing a neglected child to have one friend would be more appropriate. Finally, the average children did not fit one of the four extreme-status groups; thus, their behavior was perceived as central. In contrast, the other four status groups tended to be extreme in their behavior (Coie & Dodge).

Boivin and Begin (1986, 1989) reported that the correlations among the three single-criteria nomination scores were high for both *liked most* and *liked least*, yielding good internal consistency when the multiple criteria scores were considered (alpha = 0.77 and 0.79 for *liked most* and alpha = 0.86 and 0.82 for *liked least*). This procedure was developed and used by Coie et al. (1982). In their longitudinal 5-year study, Coie and Dodge (1983) found that after using this procedure in assessing peer status, 59 out of the 72 possible correlations were significant at the .01 level. Social preference scores were

significantly and positively correlated across all years for each cohort in their study, and social impact scores were significantly correlated across 3 of the 5 years. In addition, Coie and Dodge demonstrated that social preference in a particular year can be predicted from social preference assessed in previous years. They also determined that social status was stable. In addition, Coie and Dodge found that social status in any year was significantly related to social status in each previous year. For example, status in Year 5 was significantly related to status in Year 1 (Coie & Dodge). It has been well demonstrated that this procedure is sound and yields consistent results. Further, the longitudinal work of Coie and Dodge demonstrated the coherence of both social preference and social status.

Table 1

Categorizations and Codes

Attachment (six subcategories)

1. Typical attachment-negative feeling: notes separation, copes appropriately

2. High attachment-negative feeling: notes separation, copes appropriately with another's help

3. Low attachment-negative feeling: does not justify or cope

4. Attachment/retribution-negative feeling: copes with parents leaving

5. Attachment/increase access to parents-negative feeling: copes by trying to get parents back

6. Atypical attachment-positive feeling: justifies by depending on parent or not accepting separation

Self-reliant (four subcategories)

7. Typical self-reliant-positive feeling: enjoys or is okay to be alone, copes appropriately

8. High self-reliant-positive feeling: adds person to the scene to justify, copes appropriately

9. Low self-reliant-positive feeling: does not justify or cope, "do-nothing" responses

10. Atypical self-reliant-negative feeling: gives justification and copes, not due to separation

Attachment/self-reliant (five subcategories)

11. Typical attachment/self-reliant-positive feeling or both positive/negative feelings with appropriate justification for each: copes appropriately

12. High attachment/self-reliant: meets criteria (#11) but adds person to scene

Table 1 (*continued*)

13. Low attachment/self-reliant answer incomplete: has mixed feelings, does not justify, copes appropriately or negative feelings, does not justify, has high-coping response (gets person to rely on)

14. Attachment/self-reliant image of parents: has attachment/self-reliant response but retains image of parent to cope

15. Attachment/self-reliant increase access to parents: positive feelings with justification, copes by restraining parents

Avoidant (two subcategories)

16. Avoidant-nonresponsive: none or few feelings and denies separation

17. Avoidant-confused: is confused, not only avoids separative feelings but talks of things unrelated to photographs, focuses on irrelevant features, has illogical justification

Additional (four subcategories)

18. Anxious-scared/frightened due to unavailable parents: is scared of strangers/dark, anxiety, or fear

19. Anxious/increase access to parents: meets criteria (#18) but copes by trying to be with parents

20. Atypical-positive: attributes feelings to parents leaving

21. Bizarre-hostile: hates mom or dad, fears abandonment or death

Table 2

Results of Cohen's Kappa Analyses for the 5 Main Categories

Pair	Percentage agreement	Cohen's kappa
A	.90	.85[a]
B	.81	.72[b]
C	.89	.84[a]
D	.89	.84[a]
E	.89	.83[a]
F	.97	.95[a]
G	.86	.83[a]
H	.85	.80[a]
I	.84	.78[a]
J	.79	.68[b]

[a]Excellent agreement.

[b]Good agreement.

Table 3

Results of Cohen's Kappa Analyses for the 21 Subcategories

Pair	Percentage agreement	Cohen's kappa
A	.81	.78[a]
B	.68	.63[b]
C	.81	.78[a]
D	.79	.75[a]
E	.82	.79[a]
F	.93	.92[a]
G	.84	.81[a]
H	.79	.76[a]
I	.77	.73[a]
J	.71	.65[b]

[a]Excellent agreement.

[b]Good agreement.

CHAPTER 4

RESULTS

Hypotheses

Given the issues raised in the literature review and the measures derived from the Separation Anxiety Interview and Picture Nomination Interview, the following hypotheses guided the current study:

1. Children who are popular within their peer group will score higher on the attachment scale of the Separation Anxiety Interview than children who are neglected, rejected, or controversial within their peer group.
2. Children who are popular within their peer group will score higher on the self-reliant scale of the Separation Anxiety Interview than children who are neglected, rejected, or controversial within their peer group.
3. Children who are popular within their peer group will score lower on the avoidant scale of the Separation Anxiety Interview than children who are neglected, rejected, or controversial within their peer group.
4. Children who are popular within their peer group will score higher on the attachment scale of the Separation Anxiety Interview than children who are rejected within their peer group.

5. Children who are popular within their peer group will score higher on the self-reliant scale of the Separation Anxiety Interview than children who are rejected within their peer group.
6. Children who are popular within their peer group will score lower on the avoidant scale of the Separation Anxiety Interview than children who are rejected within their peer group.

Both Chapter 3 and this chapter contain descriptive information that includes means, ranges, and intercorrelations with regard to the representational model and sociometric data. These descriptive statistics provide important information with regard to the general tendencies of and variability within this sample. In addition, the statistical analyses of the hypotheses are presented.

The data analyses proceeded in three stages. In the first stage, relationships between the background variables and both the dependent and independent measures were examined. It is important to test for any relationship that may exist between the background variables and the dependent or independent variables to ensure that there is not an alternative explanation with regard to the results of the hypotheses testing. For these purposes, analyses vary, depending on the type of variables being tested (continuous, dichotomous, or categorical variables), and include correlation (for two continuous variables), analysis of variance (for continuous and categorical variables), *t* test (for continuous and dichotomous variables), and chi-square (for dichotomous variables).

In the second stage of data analysis, the hypotheses were tested using

t tests, allowing for a comparison of the mean for each independent variable (attachment, self-reliance, and avoidance) on the categorical dependent variable (social status: popular and unpopular). For each variable, *t* tests were computed separately for the other, self, and combined (other and self) data. In addition, given the directional nature of the hypotheses, the *t* tests employed were 1-tailed.

The third stage of analysis also employed *t* tests to examine differences between the popular and rejected social-status groups and among the other, self, and combined data. Here again, directional hypotheses led to the use of 1-tailed *t* tests.

Analyses of Background Variables

Independent Variables

To determine that no alternative explanation can be attributed to the results of the hypotheses testing, an examination of whether any relationship existed between the independent variables and the background variables was performed. For example, popular children will score higher on the attachment scale than will unpopular children (Hypothesis 1). However, if the background variables are not carefully examined, it may also mean that the education of a child's mother (for the current sample) will have an effect on the popularity of the child, the level of attachment of the child, or both. If not considered in the analyses, the researcher may make an incorrect conclusion. Thus, by analyzing the possible relationships that the independent or dependent variables may have with the background variables, the nature of these relationships may be ascertained and controlled for in Hypothesis 1.

The *t* test (2-tailed) allowed for individual comparisons of the mean for the combined (other and self) continuous variables of attachment, self-reliance, and avoidance (individually) on the dichotomous (only two levels) background variables of gender, adopted, mother's race, and father's race. For the current study, males did not score significantly different on any of the independent variables from the females. In addition, adopted children did not score significantly different on any of the independent variables from the children who were not adopted. The mean of the independent variables (individually) was not significantly different for children whose mothers or fathers were White or another ethnicity.

An analysis of variance was employed to compare the difference in means for the combined continuous independent variables of attachment, self-reliance, and avoidance as they relate to the categorical background variables of mother's marital status, father's marital status, mother's occupation, father's occupation, mother's education, and father's education. Two separate analyses were conducted for each variable of attachment, self-reliance, and avoidance: (a) one including variables pertaining to the mother and (b) one including variables pertaining to the father. For these tests, no significant relationships were found among the continuous variables of attachment, self-reliance, and avoidance as well as any of the categorical background variables.

Dependent Variables

To examine what relationship, if any, the dichotomous dependent variable social status has with any of the background variables, several analyses were also performed.

Again, these analyses were conducted to ensure that no alternative explanation could be attributed to the results of the hypothesis testing. For example, if it was found that children whose fathers work in professional jobs were more likely to be popular than children whose fathers do not work in professional jobs, this relationship among variables would need to be accounted for (controlled for) in testing the hypotheses so that the conclusions of the researcher would be accurate. This type of analysis allows the researcher to account for any relationships that could interfere with the accuracy of the hypothesis testing.

Chi-square analyses were performed for the variable social status, which is dichotomous (popular and unpopular). In addition, several of the background variables (gender, adopted, mother's marital status, father's marital status, mother's occupation, father's occupation, mother's race, father's race, mother's education, and father's education) have only two levels. This statistic includes differences between the observed and expected frequencies. This statistic also examines these differences and evaluates whether these differences, if any, are due only to sampling fluctuation or to more than just chance. For each of these background variables, it was found that they have no general association with the variable social status.

To analyze any relationship between the variable social status and the continuous background variable siblings, an analysis of variance was performed. For this test, no significant difference was found between the mean number of siblings in the popular group and the mean number of siblings in the unpopular group.

Therefore, given the results of the analysis of the background variables to both the

independent and dependent variables, it can be concluded that none of the background variables measured needs to be controlled for in the analysis of the hypotheses. These results allow more confidence in the conclusions of the hypothesis testing, as any influence of the background variables has been eliminated.

Hypotheses Testing

To address the question of whether the popular and unpopular children differed from each other on their quality of representational model, an assessment of a difference among means was conducted. The 1-tailed *t* test allowed for individual comparisons of the mean of the independent variables (attachment, self-reliance, and avoidance) on a categorical dependent variable (social status; Games & Klare, 1967). Analyses were run separately for each independent measure (other, self, and combined data).

Analyses of the mean differences in attachment for the popular and unpopular groups revealed no significant group differences for either the self or other attachment scores. However, for the combined attachment scores, a near significant difference was found, with the popular group having higher scores (mean = 17.21) on the attachment scale than the unpopular group (mean = 15.19; see Table 4). Testing for mean differences in self-reliance for the popular and unpopular groups revealed no significant group differences for either the self, other, or combined scores (see Table 4).

Testing for mean differences in avoidance for the popular and unpopular groups revealed significant group differences for the self, other, and combined scores. For avoidant other, the unpopular group was characterized by higher levels of avoidance

(mean = 8.29) than the popular group (mean = 6.71). Similarly, for avoidant self, analysis also revealed a significant difference. The unpopular group was characterized by higher levels of avoidance (mean = 9.84) than the popular group (mean = 7.79). Analysis of the combined avoidant variable revealed an even stronger difference between the unpopular and popular groups in which the unpopular group was also characterized by higher levels of avoidance (mean = 18.13) than the popular group (mean = 14.50; see Table 4).

Analyses of Popular and Unpopular Participants

In much of the literature on sociometric status, a specific focus was on the dichotomous relationship between the popular and rejected peer status groups (Coie & Dodge, 1983; Coie et al., 1982). More specifically, the rejected group was examined in previous research, with a stark contrast found between the popular and rejected groups; therefore, an examination of these two groups was warranted. The same 1-tailed, *t* test analyses were performed comparing the means of the continuous variables of the representational model for the popular and rejected peer status groups with the popular and unpopular groups.

For the attachment score, the analyses revealed group differences for the self, other, and combined variables. For the attachment other score, a near significant difference was found between scores for the popular and rejected groups in which the rejected group (mean = 8.07) scored lower than the popular group (mean = 9.43). For the attachment self and the combined attachment variables, significant differences were found between the popular (attachment self mean = 7.79 and attachment mean = 17.21)

and the rejected groups (attachment self mean = 5.92 and attachment mean = 14.00), with the popular children characterized by higher levels of attachment from their rejected counterparts (see Table 5).

An analysis of the mean differences in self-reliance for the popular and rejected groups revealed no significant group differences for either the self, other, or combined self-reliance scores (see Table 5). For the avoidant variable, significant group differences for the self, other, and combined variables were found. For avoidant other, the rejected group (mean = 8.93) was characterized by higher avoidance than the popular group (mean = 6.71). Similarly, for avoidant self, the rejected group (mean = 10.43) had higher avoidant scores than the popular group (mean = 7.79). Finally, for the combined avoidant score, which is in line with the aforementioned findings, the rejected group (mean = 19.36) was characterized by higher avoidance scores than the popular group (mean = 14.50; see Table 5).

Table 4

t Tests: Interview-Based Mean Ratings by Popularity

Interview-based ratings	Popular (n = 14)	Unpopular (n = 31)	t value
	Attachment		
Other	9.43	8.45	-1.14
Self	7.79	6.74	-1.26
Combined	17.21	15.19	-1.34#
	Self-reliance		
Other	8.43	7.81	-0.69
Self	9.07	8.16	-0.92
Combined	17.50	15.97	-0.90
	Avoidance		
Other	6.71	8.29	2.16*
Self	7.79	9.84	2.25*
Combined	14.50	18.13	2.52**

#$p < .10$. **$p < .01$.
*$p < .05$. *Note. df* = (25, 13)

Table 5

t Tests: Interview-Based Mean Ratings by Social Preference

Interview-based ratings	Popular (n = 14)	Unpopular (n = 14)	t value
	Attachment		
Other	9.43	8.07	-1.32#
Self	7.79	5.92	-2.09*
Combined	17.21	14.00	-1.99*
	Self-reliance		
Other	8.43	7.50	-0.89
Self	9.07	7.93	-1.00
Combined	17.50	15.43	-1.04
	Avoidance		
Other	6.71	8.93	1.85*
Self	7.79	10.43	1.94*
Combined	14.50	19.36	2.07*

#$p < .10$.
*$p < .05$. *Note.* $df = (13, 13)$.

CHAPTER 5

DISCUSSION

Purpose of the Study

This study was intended to provide some insight with regard to the connection among a child's early attachment relationships, internal representation of those relationships, and status within his or her peer group. More specifically, the general purpose of this study was to examine one of these associations: between the quality of preschoolers' internal representations of attachment and the peer status they achieve in the context of their classroom.

The literature provided a solid foundation from which to conduct the present study. The attachment relationship between mothers and their children has been thought and demonstrated to have a significant influence on behavior and development throughout the lives of their children (Bowlby, 1973; Bretherton, 1987; Sroufe & Fleeson, 1986). In addition, studies have linked attachment quality as measured in infancy to young children's expression and control of affection throughout their preschool years (LaFreniere & Sroufe, 1985). Other studies have confirmed that infants who have secure attachments with their mothers were more likely to demonstrate positive social behavior at 3 and 4 years of age. These children were also found to be more

curious, confident, and skillful and to be less dependent (Erickson et al., 1985) than those with insecure attachments. LaFreniere and Sroufe also reported that because these securely attached children were more socially oriented, empathetic, cooperative, and friendly than those with insecure attachments, they were more popular and had more friends. Further, it is from the attachment relationship that an internal representational model emerges within the mind of the child, including the child's own external reality and his or her own possible actions (Bowlby; Bretherton; Craik, 1943). In essence, the representational model is believed to guide the child's appraisal of his or her experience and his or her behavior (Main et al., 1985) in future relationships such as those with his or her peers (Bretherton). Thus, the purpose of this research was to examine the link between children's representational models of attachment and the peer status they achieve in the context of their classroom.

In this chapter, information relevant to the interpretation and discussion of the study's results is presented. In the first section, a consideration of the methodological limitations and strengths of the study is provided. In the second section, the findings of the study are reviewed and discussed in light of the literature considered earlier in this thesis. The final section examines the conclusions and implications for possible future research.

Limitations of the Study

Before considering the results of this study, it is important to consider the methodological limitations of this work. In conducting this type of research, many

challenges were faced, many of which were possible to overcome and some of which were not as easily managed.

Number of Participants

As presented in Chapter 4, the number of participants for whom there were both representational model and sociometric data was relatively small, representing only 46% of the available population. The measure that limited the number of participants was the Separation Anxiety Interview. Few children were available to draw upon, and there was not a particularly good response rate in terms of consent for this interview. One possible reason for this lack of response could be that all communication with the parents was done in written form only. It may also be that if the parents had met the researchers and had had an opportunity to ask questions, it may have made a difference in terms of their comfort level with the interview.

Another possible reason for the low response rate is that one teacher was very protective of her students and was less than enthusiastic with regard to the research. By far, this teacher's class had the lowest response rate of all the classes. If asked by a parent about the research, her attitude could have come through in her communications with the parent. When the interviewers came into her class to select children to be interviewed, her nonverbal and sometimes verbal communication sent the message to the interviewer that this research was not welcome—another possible reason why some of the children in her class refused to be interviewed.

The relatively small number of participants for this sample has implications for

the results of the testing of the hypotheses. In other words, statistical analyses using a small sample size will be much more likely to miss a meaningful relationship that exists in the data.

In addition and more importantly, the unique sample has implications for the results of this study; that is, the generalizability of these results was limited to children in the Child and Family Development Center preschool. As was previously mentioned, this sample was predominately White, with their biological parents still married and working in professional jobs. This sample is not representative of any larger population (e.g., Salt Lake City, Utah) than the Child and Family Development Center. However, even though the number of participants was relatively small due to participation in the Separation Anxiety Interview, the interview itself was a strength that compensated to some degree for the limitation posed by the small sample size. More specifically, while the sample was small, the data were quite reliable and presumably valid. In other words, the external validity of this study was weakened by its small sample size; thus, the internal validity was high.

Strengths of the Study

While the limitation of the study was the relatively small number of participants, the design of this work was intended to contribute to the measurement and implications for representational models of attachment and peer status. Two strengths of the current study were (a) measurement of the representational model and (b) measurement of peer status. Each of these strengths is considered individually.

Representational Model: Cohen's Kappa Analyses

One strength of this study was excellent coder agreement in coding the Separation Anxiety Interview, which measured the representational model. To assess coder agreement, Cohen's kappa analyses were used for decisions concerning the 5 main categories (attachment, self-reliant, attachment/self-reliant, avoidant, and additional) and for decisions concerning the 21 subcategories. Since the Cohen's kappa agreement statistic corrects for agreement between coders, the kappa results were more conservative and gave greater confidence to the results. In addition, according to the standards of Bakeman and Gottman (1997), the kappas for both the 5 main categories (mean kappa = .81) and the 21 subcategories (mean kappa = .76) were excellent.

The children's responses to the Separation Anxiety Interview were varied, showing that the pictures and questions triggered an emotional reaction. Some of the children asked questions about the pictures and seemed interested in them. In contrast, other children were not interested, with some even refusing to look at the pictures. The reactions of the participants for the current study were much the same as those reported by Slough and Greenberg (1990). Given the results of their research, the age for which this instrument was targeted, the excellent results from Cohen's kappa analyses of coder agreement (coupled with the consensus coding), and the reaction of the participants during the interview, the Separation Anxiety Interview appears to be an appropriate instrument in the assessment of children's representational models of attachment. Given these results and the validity of the measure in previous research, the representational

models were measured as proposed.

Peer Status

In addition to the strength of measuring the representational model, using the peer nomination technique was a great asset to the research. This procedure has been used extensively in previous research and has been found to be a reliable measure of peer status (Coie & Dodge, 1983; Dodge, 1985; Dodge et al., 1982; Hartup et al., 1967; LaFreniere & Sroufe, 1985; Sroufe & Jacobovitz, 1989). Much of the previous work that utilized this measure was conducted using older children. For example, LaFreniere and Sroufe found that for this same sociometric interview conducted twice over a 2-week period, using the same age group as in the present study, the test-retest reliabilities of sociometric status were highly reliable (.65 and .79, $p < .01$), respectively. In addition, the main accommodation made for the age of the participants in the present study, which was made in previous studies, was a picture nomination rather than the participants reading names to nominate their peers. Photographs were taken to allow for a simple viewing and nomination of peers, thus eliminating the chance of a problem with reading the names that could interfere with a particular nomination (LaFreniere & Sroufe; McCandless & Marshall, 1957).

With regard to the continuity of peer status, much should be considered. Several studies have demonstrated that peer status is relatively stable over time (Coie & Dodge, 1983; Sroufe & Jacobovitz, 1989). In support of this view, Sroufe (1979) indicated that "we cannot assume that early experiences will somehow be canceled out by later

experience; lasting consequences of early inadequate experience may be subtle and complex, . . . but there will be consequences" (p. 835). In addition, Sroufe and Fleeson (1986) pointed out that

> relationships are not constructed afresh, nor are new relationships based on the simple transfer of particular responses from old relationships. Instead, it is assumed that previous relationships exert their influence through the attitudes, expectations, and understanding of roles that they leave with the individual. (p. 53)

Thus, the behavior a person exhibits in a peer setting has been found to remain stable over time.

Discussion of the Findings

As reported, no significant differences were found between the popular and unpopular groups or the popular and rejected groups for the self-reliant scale. No significant differences were found between the popular and unpopular groups for self and other measures of the attachment scale. However, the popular group scored significantly higher than the unpopular group on the combined attachment scale. The popular group also scored significantly lower on the avoidance scale than the unpopular group. Finally, the popular group also scored significantly higher on the attachment scale (self and combined measures) and significantly lower on the avoidance scale than the rejected group.

To better understand these findings, reconsidering the attributes of response characteristics in the Separation Anxiety Interview and characteristics of the peer status categories is useful. In the Slough and Greenberg (1990) study and in the present study, it

was found that during the Separation Anxiety Interview children who scored high on the attachment component were those who were able to freely discuss their feelings and then to express that their feelings were linked to the separation from their attachment figure. Children who scored high on the self-reliant scale expressed an ability to utilize strategies for dealing with the separation. Finally, children who scored high on the avoidant scale refused or were unable to answer questions, gave incomplete answers, or discussed issues not related to the pictures or questions. It was also useful to review Slough and Greenberg's theory-based scoring for the Separation Anxiety Interview. Slough and Greenberg predicted that a child who had formed a working model of a responsive and consistent caregiver would express confidence in the context of easier separations. However, when a secure child was confronted with a more difficult separation, that child was able to express concerns or feelings of sadness about the separation since the child expected the caregiver to be responsible to these concerns. In contrast, Slough et al. (1988) expected that an insecure child would respond in various ways, possibly by claiming self-reliance in difficult separations or being unable to talk about the separations.

In addition to the response characteristics for the Separation Anxiety Interview, it was useful to reconsider the characteristics of peer status as well. Coie et al. (1982) found that popular children were viewed by peers as prosocial. They received high scores for cooperates and leader descriptions and low scores for disrupts and fights. However, children classified in the other categories and referred to in this work as unpopular in their peer group scored lower for cooperates and higher for disrupts and fights, but their

scores were not as contrasting to the popular group as the rejected group alone. This particular difference is discussed later in this section.

In light of the characteristics of the representational model and peer status, many of the findings in the current study support the premise that the internal-working model of the attachment relationship plays a role in the development of every child (Bowlby, 1973, 1980; Bretherton, 1987; Bretherton et al., 1990; Craik, 1943; Isabella, 1995; Johnson-Laird, 1983; Main et al., 1985; Sroufe, 1990; Sroufe & Fleeson, 1986). In other words, the internal-working model was related to children's peer status. The findings also support the principle of Main et al.; that is, the internal-working model is believed to serve as the foundation from which a person interacts in relationships. In other words, the internal-working model was related directly to children's peer status in their preschool setting.

Based upon the findings in the current study, avoidance showed the strongest relationship of all the components of the representational model for the popular and unpopular groups. Of the three scales, avoidance was easier to code than either attachment or self-reliance because avoidant behavior stood out as the more salient of the three scales. Relatedly, Slough and Greenberg (1990) found that "of the three Separation Anxiety Interview (referred to herein as Separation Anxiety Interview) summary score components, attachment, self-reliance, and avoidance, the avoidance measure shows the strongest relationship to the short-separation-reunion measures" (p. 79; which was their measurement for quality of attachment) and that the more avoidant the child was during the Separation Anxiety Interview, the more insecure she or he was during the separation-

reunion sequence.

To illustrate the representational model for children who were higher on the avoidant component, Main et al. (1985) reported that child and parent dyads restricted in discourse "had frequent pauses between adult and child conversational turns where topics were restricted to impersonal perspective and/or inanimate objects, with limited topic elaboration and frequent rhetorical questions or empty conversational turns by the parent" (Main et al., p. 83) and were most often dyads identified as insecure-avoidant in infancy. In other words, children who have insecure-avoidant representational models have restricted models in which there is limited access to emotion and other affective resources. Main et al. also reported that in almost every assessment they conducted children determined to be insecure-avoidant in infancy showed avoidant response patterns at 6 years of age. Main et al. further described the functioning of the representational model:

> The rules for the direction of attention and behavior serve actively and repeatedly to restrict and perhaps in some cases to distort the types of information that may be made available, either through memory or through attention to the immediate environment. Each internally or externally originating signal that is potentially disruptive to the system is not merely blocked from perception . . . but must be actively countered by perceptual and behavioral control mechanisms. (p. 91)

In other words, if the stimulus does not fit, then it is filtered out or repressed. As previously mentioned, filtration or repression is especially evident with insecure-avoidant children. Given earlier findings by Main et al., the findings in the present study (unpopular children scored higher on the avoidance scale) make sense based upon how a child with an insecure-avoidant representational model is expected to act within his or

her peer group.

In addition, it makes sense that popular children scored higher on the attachment scale based upon how a child with a secure representational model is expected to act among his or her peers. A child with secure attachment and a representational model has a wide range of feelings and resources from which to draw when interacting with peers. As previously indicated, LaFreniere and Sroufe (1985) found that securely attached children are more socially oriented, empathetic, cooperative, and friendly than their insecure counterparts and that securely attached children are more popular and have more friends. A child with high avoidance is unable to display more socially oriented behavior with components of affect such as empathy or friendliness, whereas a secure child is able to utilize a much-less restricted model and is better able to exhibit a wide range of emotion.

These findings suggest that there is a difference in the quality of the representational model and that the model has an impact on later behavior (as measured through peer status). For example, if a child has a representational model of attachment based upon a history with the mother as unavailable and insensitive to his or her needs (emotions not validated or understood), then that may result in an avoidant representational model of attachment for that child. Consequently, if that child is interviewed using the Separation Anxiety Interview and he or she is presented with a separation, that child may have emotions and reactions to this separation (but no access to them) as that child is restricted to their use and understanding. In addition, a child whose model is restricted in this way would not typically behave in a socially oriented

manner in which empathy or friendliness is a component of his or her behavior.

Popular and Rejected Groups

In addition to the discussion of the popular and unpopular group findings, the popular children scored significantly higher on both the attachment and avoidant scales of the Separation Anxiety Interview than those who were rejected within their peer group. As previously mentioned in this section, Coie and Dodge (1983) found that peer scores for rejected children were in direct contrast to scores for popular children. For example, the rejected children scored high on components such as fights and disrupts and low on cooperates and is a leader. In contrast, the popular children scored low on fights and disrupts and high on cooperates and is a leader. Given these results, some insight was provided from examining the popular and rejected groups. Conceptually, these groups are distinct, falling on opposite ends of the social preference scale. This scale was used to create the procedure employed to measure peer status. As previously mentioned, popular children who are characterized by a warm and positive interpersonal style have secure attachments compared with their insecure counterparts who are much less socially oriented (LaFreniere & Sroufe, 1985). Therefore, a more clear and more detectible distinction may have occurred between these two groups as related to their attachment scores. The same reasoning would likely apply for the avoidance scores, as detailed in the discussion of the popular and unpopular groups. In this case, the difference was even greater on the avoidance scores between the popular and rejected groups than between the popular and unpopular groups, supporting the argument that these groups should

consist of children with the greatest difference in the representational model. Given these results for the popular and rejected groups, children classified as rejected likely had a representational model of attachment that was the most avoidant compared with the popular group.

As previously reported, no significant differences were found between the popular and unpopular groups or the popular and rejected groups for the self-reliant scale of the Separation Anxiety Interview. It has been well demonstrated through other studies that the instruments used in the present study were a valid way to assess both the representational model and peer status. However, both the age and number of participants may have influenced the outcome of the results in this case. Because of the age of the participants, I may not have measured what I expected to measure with regard to peer status. Age is not likely an issue for the measure of representational model but is more likely an issue for the measure of peer status.

Age of Participants

With regard to peer status assessment and age of the children, continuity may have been a problem. Coie and Dodge (1983) reported continuity with regard to the peer status of children; that is, the status each child developed remained stable over time. In addition, continuity was generated as a result of utilizing the Peer Sociometric Status Interview (see Appendix C) to measure each child's status. However, Coie and Dodge initially used this interview when their participants were in the first and second grades. Thus, the age of these children was greater than the age of the children in the present

study. In another study, Coie et al. (1982) found some "age shifts" from the third to eighth grades; that is, some children's peer status shifted at certain ages. They found that the younger children had a simple picture of unpopular children compared with the eighth-grade children. For the younger children, only one reason was given for rejecting another child; however, for older children, several reasons were usually given. While Coie and Dodge found coherence in peer status across ages, it is not until first grade or older that a child's behavior is consistent with his or her peers. On the other hand, LaFreniere and Sroufe (1985) demonstrated that there is coherence as related to peer status in participants who were the same age as those in the present study using the same measure for peer status as was used in the present study. Therefore, while there was a difference in age, as has been discussed, the findings by LaFreniere and Sroufe support using the measure of peer status in the current work.

Background Variables

As reported in Chapter 4, none of the background variables was related to either peer status or representational model variables. For this sample, the quality of the representational model that a preschool-aged child has is not influenced by familial demographic characteristics such as parents' profession, parents' education, gender, or number of siblings. Perhaps a child's representation of his or her parent as sensitive and responsive to his or her needs is not dependent on a particular demographic aspect in the life of that child but rather the sensitivity on the part of the parent and the quality of the interaction between parent and child (Isabella, 1993, 1995; Isabella & Belsky, 1991;

Isabella, Belsky, & von Eye, 1989). Similarly, the lack of relationship between any of the background variables and the dependent variable of peer status may mean that the skills and behaviors exhibited by a preschooler among his or her peers are not influenced by the demographics assessed in the current study and are influenced more by other factors such as quality of attachment or representation (Erickson et al., 1985; LaFreniere & Sroufe, 1985; Sroufe et al., 1984).

Separation Anxiety Interview Self, Other,

and Combined Scores

As presented in Chapter 3, the Separation Anxiety Interview was developed in such a way that questions were asked of each child about the child in the picture (other) and the child himself or herself (self). Therefore, the questions were coded and scored separately. In their development and use of this measure, Slough and Greenberg (1990) found intercorrelations for self-reliance and avoidance, ranging from $r = .41$ to $r = .58$. In the current research, the following correlations were moderate: (a) attachment: $r = .61$, $p < .0001$; (b) self-reliant: $r = .61$, $p < .0001$; and (c) avoidance: $r = .71$, $p < .0001$. Thus, separate self and other measures were used to test the hypotheses. Two measures were combined, and a combined score was used as well. By combining many scores, as was done in the present study, the error of measurement was averaged, leaving a more clear perception of the underlying relationships. The combined attachment, self-reliant, and avoidant variables were those for which significant differences were seen between the popular and unpopular groups (avoidant) and the popular and rejected groups (attachment

and avoidant).

Conclusions and Implications for Future Research

One step that could be taken if this study were to be replicated would be to incorporate a "remeasure" of peer status as a part of the research design. These findings would likely support LaFreniere and Sroufe's (1985) findings that peer status for this age group is coherent across time.

In addition to remeasuring peer status, another step would be to significantly increase the sample size, including a more heterogeneous group of preschoolers. This measure would allow for much greater generalizability of the results.

It would also be advantageous to include an independent measure of social competence and a teacher rating of peer status. Both of these measures would give greater insight and validity to the measurement of peer status. In other words, these additional measures would potentially validate the peer status measure used in the present study and also solicit additional information from other sources, lending greater insight into peer status generally.

Finally, a step that may address any concern about the individual characteristics of each child playing a role in either measure would be to employ a measure of temperament. This measure would lend even greater validity to the measures of representational model and peer status. In other words, temperament could be assessed and controlled for in the analyses of group differences on the variables of attachment, self-reliance, and avoidance.

In conclusion, although the number of participants was relatively small, the richness of information, methods employed, and choice of measures were great assets to the current research. In addition, the findings provided some insight into the connections among a child's early relationships, his or her representation of those relationships, and his or her behavior in a peer group. In other words, a relationship can be found between the quality of preschoolers' internal representation of attachment and the peer status they achieve in the context of their classroom.

APPENDIX A

LETTER AND CONSENT FORM:

FIRST REQUEST

Dear Parents:

I am an associate professor of human development and family studies in the Department of Family and Consumer Studies, the home department of the Child and Family Development Center. Beginning this fall, with the cooperation of the Child and Family Development Center, I will be conducting a study to explore children's thinking about their significant relationships with family and friends.

Attached is a detailed explanation of the study. I invite you to read this explanation. If you are willing to have your child participate, please sign and return one copy of the form.

I will be happy to answer any questions you may have about the research. Please feel free to call me at my office (801-581-5459) or at my home (801-485-1658).

Thank you in advance for your time in considering this request. It is only with your cooperation that this research will be completed successfully.

Sincerely,

Russell A. Isabella, PhD
Associate Professor
Human Development and Family Studies
Department of Family and Consumer Studies

Informed Consent Form

The study will span an 8-month period and will examine children's thinking about themselves and their families as it is related to the ways in which children are perceived by their peers. The research project will begin in October 1995 and will continue through May 1996.

Description of Participation

During the project, participating children will be interviewed, individually, on two separate occasions. All interviews will be conducted by trained graduate or advanced-undergraduate students; all interviews will be conducted in the parent library adjacent to the west preschool classroom.

In the first interview (Fall 1995), each child will be shown a series of photographs of a child and parents, each depicting a different form of the parents' separation from the child. Examples will be of the parents tucking the child into bed at night, the parents going out for the evening, and the parents going away for the weekend. For each photograph, after a brief explanation to the child of the scenario depicted, he or she will be asked to say how the child in the picture will react to the separation in terms of feelings and actions. This interview will last approximately 30 minutes.

For the second interview (Spring 1996), each child will be shown photographs of every other child in his or her class and will be asked to select photographs as a means of demonstrating playmate preferences for various play settings. This interview will last approximately 20 minutes.

Participation Is Voluntary

Participation in this study is voluntary. Refusal to participate will involve no penalty or loss of benefits to your child or to you. All children receiving written permission from their parents will be invited to participate in each of the two interviews as described above. Each child will have the opportunity and the right to decline participation on both interview occasions, and each child will also be informed that he or she may end the interview at any time. In other words, although a child cannot participate without the consent of a parent, even this consent will not eliminate the child's right to decline participation in this study.

Potential Benefits and Risks

It is always necessary to consider the potential risks and benefits associated with participation in research. It is possible that participating children will enjoy the opportunity to work one-on-one with the interviewers who will be showing pictures and asking questions. Although the regular classroom activities offer many such opportunities, it is not anticipated that the research interviews will be any more interesting than such regular activities. It is also possible that some children will experience sadness, anger, or other negative feelings during the course of the first interview. In all cases, interviewers will be sensitive to children's needs and feelings. If a child exhibits obvious distress, the interview will end. In addition, each child will be free to end his or her interview and return to his or her classroom at any time.

Confidentiality

The confidentiality of all participants' interview responses will be maintained through using identification numbers. Each participating child will be assigned an identification number; this will be the only identifying information that will appear on interview transcripts. Although a number is necessary for our research purposes that we maintain a key that will link children's names to their identification numbers, only the principal investigator (Dr. Russell A. Isabella) and one graduate student will have access to this key. Also of importance is that the persons involved in conducting this research will be reminded frequently of their obligation to maintain the confidentiality of the children participating in the study. Finally, the findings of this research will be presented only in professional journals or at professional conferences. Such findings will always be presented at the level of the group of children studied. Information with regard to the identities of the children will never be discussed.

Contacts: Questions and Concerns

If you have questions now or at any time during the course of the study, you may contact Dr. Russell A. Isabella, Department of Family and Consumer Studies, University of Utah, Salt Lake City, UT 84112. Office phone: (801)581-5459; home phone: (801)485-1658.

If you have concerns that cannot be discussed with the researcher, you may contact the University of Utah Vice President for Research, Dr. Richard Koehn, at (801)581-7236.

Signed Consent

I have read and understand the material explained in this document, and I have received a copy of this document (attached) for my own purposes. By signing the statement below, I consent to have my child participate in the research described here.

_____ _____

(Child's name) (Parent's signature)

_____

(Parent's name printed)

If you do not consent to have your child participate in this study, AND YOU DO NOT WISH FOR YOUR CHILD'S PICTURE TO BE TAKEN FOR INCLUSION IN THE STUDY, please sign below and return.

_____ _____

(Child's name) (Parent's signature)

_____

(Parent's name printed)

APPENDIX B

LETTER AND CONSENT FORM:

SECOND REQUEST

Dear Parents:

I wish to make a final plea for this quarter to have you consider allowing your child to participate in the research project I am conducting at the Child and Family Development Center. To date, about 50 children have been given permission to take part in the study. This represents an encouraging level of parent support for the project, but there is no doubt that the research can be more successful with even greater participation.

We have begun conducting our first round of interviews, and the children have been rather enthusiastic in responding to the questions we are asking. In addition, the interviews themselves are a good deal shorter than I had thought they would be—15 minutes or less compared with the 30 minutes I had anticipated.

I have attached another summary of the study, and each classroom has extra copies of the original description and consent form. Please take a few minutes to read about the project and to consider allowing your child to participate.

Thank you in advance for your time and consideration. I hope to keep you posted during the year with regard to the project's progress.

Sincerely,

Russell A. Isabella, PhD
Associate Professor
Human Development and Family Studies
Department of Family and Consumer Studies

Informed Consent Form

The study will span an 8-month period and will examine children's thinking about themselves and their families as it is related to the ways in which children are perceived by their peers. The research project will begin in October 1995 and will continue through May 1996.

Description of Participation

During the project, participating children will be interviewed, individually, on two separate occasions. All interviews will be conducted by trained graduate or advanced-undergraduate students; all interviews will be conducted in the parent library adjacent to the west preschool classroom.

In the first interview (Fall 1995), each child will be shown a series of photographs of a child and parents, each depicting a different form of the parents' separation from the child. Examples will be of the parents tucking the child into bed at night, the parents going out for the evening, and the parents going away for the weekend. For each photograph, after a brief explanation to the child of the scenario depicted, he or she will be asked to say how the child in the picture will react to the separation in terms of feelings and actions. This interview will last approximately 30 minutes.

For the second interview (Spring 1996), each child will be shown photographs of every other child in his or her class and will be asked to select photographs as a means of demonstrating playmate preferences for various play settings. This interview will last approximately 20 minutes.

Participation Is Voluntary

Participation in this study is voluntary. Refusal to participate will involve no penalty or loss of benefits to your child or to you. All children receiving written permission from their parents will be invited to participate in each of the two interviews as described above. Each child will have the opportunity and the right to decline participation on both interview occasions, and each child will also be informed that he or she may end the interview at any time. In other words, although a child cannot participate without the consent of a parent, even this consent will not eliminate the child's right to decline participation in this study.

Potential Benefits and Risks

It is always necessary to consider the potential risks and benefits associated with participation in research. It is possible that participating children will enjoy the opportunity to work one-on-one with the interviewers who will be showing pictures and asking questions. Although the regular classroom activities offer many such opportunities, it is not anticipated that the research interviews will be any more interesting than such regular activities. It is also possible that some children will experience sadness, anger, or other negative feelings during the course of the first interview. In all cases, interviewers will be sensitive to children's needs and feelings. If a child exhibits obvious distress, the interview will end. In addition, each child will be free to end his or her interview and return to his or her classroom at any time.

Confidentiality

The confidentiality of all participants' interview responses will be maintained through using identification numbers. Each participating child will be assigned an identification number; this will be the only identifying information that will appear on interview transcripts. Although a number is necessary for our research purposes that we maintain a key that will link children's names to their identification numbers, only the principal investigator (Dr. Russell A. Isabella) and one graduate student will have access to this key. Also of importance is that the persons involved in conducting this research will be reminded frequently of their obligation to maintain the confidentiality of the children participating in the study. Finally, the findings of this research will be presented only in professional journals or at professional conferences. Such findings will always be presented at the level of the group of children studied. Information with regard to the identities of the children will never be discussed.

Contacts: Questions and Concerns

If you have questions now or at any time during the course of the study, you may contact Dr. Russell A. Isabella, Department of Family and Consumer Studies, University of Utah, Salt Lake City, UT 84112. Office phone: (801)581-5459; home phone: (801)485-1658.

If you have concerns that cannot be discussed with the researcher, you may contact the University of Utah Vice President for Research, Dr. Richard Koehn, at (801)581-7236.

Signed Consent

I have read and understand the material explained in this document, and I have received a copy of this document (attached) for my own purposes. By signing the statement below, I consent to have my child participate in the research described here.

_____ _____

(Child's name) (Parent's signature)

_____

(Parent's name printed)

If you do not consent to have your child participate in this study, AND YOU DO NOT WISH FOR YOUR CHILD'S PICTURE TO BE TAKEN FOR INCLUSION IN THE STUDY, please sign below and return.

_____ _____

(Child's name) (Parent's signature)

_____

(Parent's name printed)

APPENDIX C

PEER SOCIOMETRIC STATUS INTERVIEW

Instructions

Interviewers: Tell each child that you want to ask him or her some questions about the children in his or her class, that you will show him or her some pictures, and that it will not take very long at all.

After the child has answered each question by pointing out three children, be sure to (a) write down the three identification numbers and (b) mix up the pictures so that they are in a different, random order before you ask the next questions. Do this after EVERY question.

Protocol

"I'm going to ask you some questions, and you can answer the questions by pointing to pictures of your classmates.

1. Which three children in your class do you *most like to play with*?

(Mix Up the Pictures)

2. Which three children in your class do you *not like to play with*?

(Mix Up the Pictures)

3. Which three children in your class would you *want to invite to your birthday party*?

(Mix Up the Pictures)

4. Which three children in your class would you *not want to invite to your birthday party*?

(Mix Up the Pictures)

5. Which three children in your class would you *most want to ride in the car with if your class went on a field trip*?

(Mix Up the Pictures)

6. Which three children in your class would you *not want to ride in the car with if your class went on a field trip*?

Okay. That's all I want to ask you. Thanks for coming with me and answering my questions."

Response Record

Identification number: _____ Interviewer: _____

Date: _____

1.	Most like play?	_____	_____	_____
2.	Not like play?	_____	_____	_____
3.	Invite party?	_____	_____	_____
4.	Not invite?	_____	_____	_____
5.	Ride with in car?	_____	_____	_____
6.	Not ride with?	_____	_____	_____

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